September 3, 2002 states that the amendments proposed in the response submitted August 17, 2002, namely the recitation of "identity to the entirety of SEQ ID NO:198" would require further consideration and/or a search. Applicants submit that no new matter was introduced to amended claims 3 and 22.

Following the above amendments, and as further discussed below in the context of the Examiner's rejections, non-elected claims 1-2, 9-12, 17-21, 23-25, and 27-64 have been cancelled, claims 3, 13, 22, and 65 have been amended and new claim 66 has been added. Applicants submit that each of these amendments is supported in the specification as filed and no new matter has been added. It is also noted that each of the above amendments is made without prejudice to prosecution of any or all subject matter modified by this amendment in a related divisional, continuation and/or continuation-in-part.

Rejection Under 35 U.S.C. § 101/112 (Utility)

Claims 3, 4, 6-8, 13, 22, and 65 stand rejected under 35 U.S.C. § 101 as allegedly lacking a patentable utility due to said claims not being supported by either specific and/or substantial utility or a well established utility. More specifically, the Examiner alleges that the claimed nucleic acid sequence, SEQ ID NO:198, is not supported by a specific asserted utility because the disclosed use of this composition is not specific and is generally applicable to any nucleic acid. Applicants respectfully traverse this rejection.

Applicants have identified a specificity associated with the claimed polynucleotide, *i.e.,* ovary tumor-specificity, that is sufficient to establish utility under 35 U.S.C. §101. In the instant application, the claimed polynucleotide, SEQ ID NO:198, was identified using the POTS 2 subtraction library as described on page 91, lines 8 through 17 and Table VII, page 99 through page 100. The POTS 2 library was generated using tracer cDNA derived from primary ovarian tumor tissue subtracted against a selection of normal tissues. Further, on page 6, line 19 through page 7, line 3, ovarian tumor proteins, and the polynucleotides encoding said proteins, are identified by their increased level of expression in ovarian tumor samples. More particularly, at page 6, line 19, through page 20, line 3, the specification discloses that polynucleotides of the invention are "expressed at a level that is at least two fold greater than the level of expression in normal tissues." Accordingly, the ovarian tumor specificity of SEQ ID

NO:198 was clearly disclosed in the specification as filed. Applicant's have included, for the Examiner's convenience, a new Declaration by Dr. Steven P. Fling. It demonstrates, using Real-Time PCR analysis, that SEQ ID NO:198, clone 57886 or O590S, was shown to be over-expressed in over 65% of ovarian tumor samples tested, 50% of tumor samples derived from SCID mice, and 35% of ovarian tumor cell lines tested, when compared to both normal ovarian tissue and an extensive panel of normal tissue. Little or no expression was observed in normal esophagus, spinal cord, bladder, colon, liver, PBMC (activated or resting), lung, skin, small intestine, stomach, skeletal muscle, pancreas, dendritic cells, heart, spleen, bone marrow, thyroid, trachea, thymus, bronchia, cerebellum, breast, brain, bone, adrenal gland and salivary gland. Further, the level of expression observed in the ovarian tumor samples ranged from approximately 10-fold to 500-fold higher than that seen in normal tissues, including normal ovary. Applicants submit that polynucleotides of the current invention are those that are over-expressed at least two-fold. Therefore, based on the at least 10-fold over-expression of SEQ ID NO:198 in ovarian tumor samples, Applicants submit that SEQ ID NO:198 is indeed expressed at a sufficient level to allow the detection of ovarian cancer.

The Examiner further alleges that the specification does not teach or suggest which residues of the elected sequence, SEQ ID NO:198, are responsible for the specific analysis or detection process claimed. The Examiner also alleges that, concerning the 50 contiguous nucleotides, no utility would result from detection, unless the functional or active residues responsible for the ovarian tumor-specificity are within that set 50 nucleotides. Applicants respectfully traverse this rejection.

Applicants submit that based on the disclosure that SEQ ID NO:198 is over-expressed in ovarian cancer, one of skill in the art would appreciate that all residues of SEQ ID NO:198 would be over-expressed in ovarian cancer relative to normal ovarian tissue. Based on this understanding, the skilled artisan would recognize that any 50 contiguous nucleotides of SEQ ID NO:198 would be over-expressed in ovarian cancer and therefore useful in the detection of ovarian cancer.

Thus, in view of the description in Applicants' specification as originally filed, and as further confirmed by the attached Declaration of Dr. Steve Fling, applicants submit that one of ordinary skill in the art would fully recognize that SEQ ID NO:198 has diagnostic utility

on the basis of its ovary-tumor associated expression profile. Reconsideration and withdrawal of the rejection is respectfully requested.

Rejection Under 35 U.S.C. § 112, second paragraph

Claims 3, 4, 6-8, 13, 22, and 65 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. More specifically, the Examiner alleges that claims 3, 4, 6, 13, 22, and 65 and dependent claims 7 and 8, are vague and indefinite as to what is meant therein by the limitation "the complement."

This rejection is respectfully traversed. Applicants submit that the skilled artisan, in view of Applicants' specification and in view of the general knowledge in the art, would have no difficulty understanding the metes and bounds of the presently claimed invention. However, for purposes of clarity only, applicants have amended claims 3, 13, 22, and 65, such that the polynucleotide sequences of claims 3, 4, 6, 13, 22, and 65 and dependent claims 7 and 8, encompass the complete complement (support for which can be found on page 32, line 3) of the claimed polynucleotide sequences, *i.e.,* sequences completely complementary to SEQ ID NO:198, sequences completely complementary to sequences comprising at least 50 contiguous amino acids of SEQ ID NO:198, and sequences completely complementary to sequences having at least 90% identity to SEQ ID NO:198. Reconsideration and withdrawal of the rejection is respectfully requested.

Claim 65 also stands rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. More specifically, the Examiner alleges that applicants did not clarify in any way which diagnostic or detection reagent is capable of being used for both a polymerase chain reaction or hybridization assay. This rejection is respectfully traversed. However, for purposes of clarity only, applicants have amended claim 65 in part, to recite "(b) a detection reagent for use in a polymerase chain reaction" and have added new claim 66 which recites "(b) a detection reagent for use in a hybridization assay." Applicants submit that the type of detection reagents which can be used for a PCR or which can be used for a hybridization assay would be well known by one of skill in the relevant art. Reconsideration and

withdrawal of the rejection is respectfully requested.

Rejection Under 35 U.S.C. § 102

Claims 3, 4, 6-8, and 22 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by the nucleic sequences of GenBank accession numbers AI023799 and AI307373. More specifically, the Examiner alleges that the two GenBank accession numbers are nucleic acid sequences that anticipate the limitations set forth in claims 3, 6, and 22.

Applicants submit that the current amendments to claims 3 and 22, clarifying that the polynucleotides of the claimed invention consist of the polynucleotide of SEQ ID NO:198 or the complete complement thereof, or sequences at least 90% identity to the entirety of SEQ ID NO:198 or the complete complement thereof. Reconsideration and withdrawal of the rejection is respectfully requested.

Invention Disclosure Statement

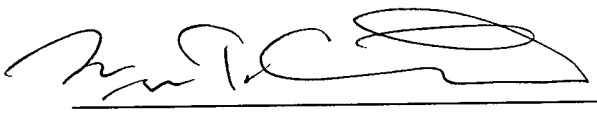
Please find submitted herewith a copy of the Invention Disclosure Statement originally submitted with the response to Final Office Action filed August 19, 2002. Applicants note that the Examiner has initialed all references cited on 1449 form and are re-submitting the initialed copy of the 1449 form to ensure its entry into the file.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "**Version With Markings to Show Changes Made**."

Favorable reconsideration and allowance of the pending claims are respectfully requested. The Examiner is invited to contact the undersigned with any questions, concerns or suggestions pertaining to this communication.

Respectfully submitted,

Seed Intellectual Property Law Group PLLC



William T. Christiansen, Ph.D.
Registration No. 44,614

Enclosures:

Postcard
Declaration by Steven P. Fling
Copy of initialed 1449

701 Fifth Avenue, Suite 6300
Seattle, Washington 98104-7092
Phone: (206) 622-4900
Fax: (206) 682-6031
C:\NrPortbl\iManage\HELENM\318078_1.DOC

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Non-elected claims 1-2, 9-12, 17-21, 23-25, and 27-64 have been cancelled.

Claims 3, 13, 22, and 65 have been amended as follows:

3. (Thrice Amended) An isolated polynucleotide comprising a sequence selected from the group consisting of:

(a) the polynucleotide recited in SEQ ID NO:198;

(b) sequences having at least 90% identity to the entirety of SEQ ID NO:198~~complements of the foregoing polynucleotide~~; and

(c) sequences completely complementary to the foregoing polynucleotides;~~sequences having at least 90% identity to the entirety of SEQ ID NO:198~~,

wherein said polynucleotide is useful in the detection of ovarian cancer.

13. (Thrice Amended) A composition comprising:

(a) an isolated polynucleotide comprising a sequence selected from the group consisting of:

(i) the polynucleotide recited in SEQ ID NO:198;

(ii) sequences having at least 90% identity to SEQ ID NO:198~~complements of the foregoing polynucleotide~~;

(iii) sequences consisting of at least 50 contiguous residues of SEQ ID NO:198; and

(iv) sequences completely complementary to the foregoing polynucleotides~~sequences having at least 90% identity to SEQ ID NO:198~~; and

(b) a physiologically acceptable carrier,

wherein said polynucleotide is useful in the detection of ovarian cancer.

22. (Thrice Amended) An isolated polynucleotide encoding a fusion protein wherein said polynucleotide comprises a sequence selected from the group consisting of:

(a) the polynucleotide recited in SEQ ID NO:198;

(b) sequences having at least 90% identity to the entirety of SEQ ID NO:198~~complements of the foregoing polynucleotide~~; and

(c) sequences completely complementary to the foregoing polynucleotides~~sequences having at least 90% identity to the entirety of SEQ ID NO:198~~,

wherein said polynucleotide is useful in the detection of ovarian cancer.

65. (Thrice Amended) A diagnostic kit for the detection of ovarian cancer, comprising:

(a) ~~an~~ two oligonucleotides comprising 10 to 40 nucleotides that hybridize under moderately stringent conditions to a polynucleotide comprising a sequence selected from the group consisting of:

(i) the polynucleotide recited in SEQ ID NO:198;

(ii) sequences having at least 90% identity to SEQ ID NO:198~~complements of the foregoing polynucleotide~~;

(iii) sequences consisting of at least 50 contiguous residues of SEQ ID NO:198; and

(iv) sequences completely complementary to the foregoing polynucleotides~~sequences having at least 90% identity to SEQ ID NO:198~~; and

(b) a detection reagent for use in a polymerase chain reaction,

wherein said polynucleotide is useful in the detection of ovarian cancer.